FILE 'HOME' ENTERED AT 17:04:33 ON 26 FEB 2009 => file req COST IN U.S. DOLLARS SINCE FILE TOTAL SESSION ENTRY FULL ESTIMATED COST 0.22 0.22 FILE 'REGISTRY' ENTERED AT 17:04:47 ON 26 FEB 2009

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25 FEB 2009 HIGHEST RN 1111946-16-7 STRUCTURE FILE UPDATES: DICTIONARY FILE UPDATES: 25 FEB 2009 HIGHEST RN 1111946-16-7

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http://www.cas.org/support/stngen/stndoc/properties.html

```
=> s methylnaltrexone/cn
            1 METHYLNALTREXONE/CN
```

=> d 11

```
ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN
T.1
    73232-52-7 REGISTRY
RN
ED
    Entered STN: 16 Nov 1984
```

Morphinanium, 17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxy-17-methyl-6oxo-, bromide, (5α) - (CA INDEX NAME)

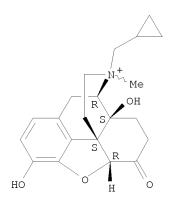
OTHER NAMES:

CN Methylnaltrexone

- Methylnaltrexone bromide CN
- CNMRZ 2663BR
- CN ${\tt N-Cyclopropylmethyl-noroxymorphone}\ {\tt methobromide}$
- CNN-Methylnaltrexone bromide
- Naltrexone methobromide CN
- CN Naltrexone methyl bromide
- FS STEREOSEARCH
- C21 H26 N O4 . Br MF
- STN Files: ADISNEWS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CIN, L.C. DDFU, DRUGU, EMBASE, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, PROMT, PROUSDDR, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL (*File contains numerically searchable property data)

(83387 - 25 - 1)

Absolute stereochemistry.



● Br-

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

141 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

141 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file medicine
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 7.88 8.10

FULL ESTIMATED COST

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FILE 'USPAT2' ENTERED AT 17:05:29 ON 26 FEB 2009
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=> s 11 'CN' IS NOT A VALID FIELD CODE 1.2 472 L1

=> s solution 33 FILES SEARCHED... L3 7560721 SOLUTION

=> 's 11 and 12

'S IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s 11 and 12
'CN' IS NOT A VALID FIELD CODE

```
'CN' IS NOT A VALID FIELD CODE
           472 L1 AND L2
=> s 12 and 13
        49 L2 AND L3
1.5
=> s pH
L6 7717984 PH
=> s chelat?
     666798 CHELAT?
L7
=> s 15 and 16 and 17
L8
            8 L5 AND L6 AND L7
=> dup rem
ENTER L# LIST OR (END):18
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,
IMSPRODUCT, KOSMET, NUTRACEUT, PCTGEN, PHARMAML, USGENE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L8
              8 DUP REM L8 (0 DUPLICATES REMOVED)
=> s 19 and pd<2004
   5 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
'2004' NOT A VALID FIELD CODE
'2004' NOT A VALID FIELD CODE
 14 FILES SEARCHED...
 16 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
  22 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
 27 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
 31 FILES SEARCHED...
            0 L9 AND PD<2004
=> s EDTA or dipotassium edetate or disodium etetate or edetate calcium disodium or sodium
edetate or trisodium edetate or potassium edetate
  21 FILES SEARCHED...
 33 FILES SEARCHED...
T.11
        451335 EDTA OR DIPOTASSIUM EDETATE OR DISODIUM ETETATE OR EDETATE CALCI
               UM DISODIUM OR SODIUM EDETATE OR TRISODIUM EDETATE OR POTASSIUM
               EDETATE
```

=> s 15 and 111

L12 16 L5 AND L11

=> dup rem

ENTER L# LIST OR (END):112

DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2, IMSPRODUCT, KOSMET, NUTRACEUT, PCTGEN, PHARMAML, USGENE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

PROCESSING COMPLETED FOR L12

L13 16 DUP REM L12 (0 DUPLICATES REMOVED)

=> s 113 and pd<2004

5 FILES SEARCHED...

'2004' NOT A VALID FIELD CODE

'2004' NOT A VALID FIELD CODE

'2004' NOT A VALID FIELD CODE

14 FILES SEARCHED...

16 FILES SEARCHED...

'2004' NOT A VALID FIELD CODE

22 FILES SEARCHED...

'2004' NOT A VALID FIELD CODE

27 FILES SEARCHED...

'2004' NOT A VALID FIELD CODE

31 FILES SEARCHED...

1 L13 AND PD<2004 T.14

=> d l14 ibib, kwic

L14 ANSWER 1 OF 1 USPATFULL on STN

ACCESSION NUMBER: 2003:30960 USPATFULL

Use of methylnaltrexone to treat immune suppression TITLE:

INVENTOR(S): Moss, Jonathan, Chicago, IL, UNITED STATES

Yuan, Chun-Su, Chicago, IL, UNITED STATES

PATENT ASSIGNEE(S): University of Chicago, Chicago, IL (U.S. corporation)

NUMBER KIND DATE _____

PATENT INFORMATION: US 20030022909 A1 20030130 US 2002-163482 A1 20020605 (10) <--

APPLICATION INFO.:

NUMBER DATE

PRIORITY INFORMATION: US 2001-295571P 20010605 (60)

US 2002-374454P 20020422 (60)

Utility APPLICATION DOCUMENT TYPE: FILE SEGMENT:

LEGAL REPRESENTATIVE: Chantal Morgan D'Apuzzo, Wolf, Greenfield & Sacks,

P.C., 600 Atlantic Ave., Boston, MA, 02210

NUMBER OF CLAIMS: 81 EXEMPLARY CLAIM: 1 LINE COUNT: 1407

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

. . Methylnaltrexone is available in a powder form from SUMM Mallinckrodt Pharmaceuticals, St. Louis, Mo. Methylnaltrexone can be prepared as a sterile solution at a concentration of 5 mg/ml.

Methylnaltrexone can also be administered as an oral agent in a capsule or tablet or in an oral solution.

DETD [0089] Blood is drawn from the arm catheter used for methylnaltrexone injection into EDTA Vacutainers prelabeled with the study number, subject number and initials, dose number, date, time of sample,

```
at the times indicated. .
IT 73232-52-7, Methylnaltrexone
       (peripheral opioid antagonists such as methylnaltrexone to treat
       opioid-induced immune suppression)
=> dup rem
ENTER L# LIST OR (END):15
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,
IMSPRODUCT, KOSMET, NUTRACEUT, PCTGEN, PHARMAML, USGENE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L5
            45 DUP REM L5 (4 DUPLICATES REMOVED)
=> s 115 and pd<2004
  5 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
'2004' NOT A VALID FIELD CODE
'2004' NOT A VALID FIELD CODE
 14 FILES SEARCHED...
  16 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
 22 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
 27 FILES SEARCHED...
'2004' NOT A VALID FIELD CODE
 31 FILES SEARCHED...
            3 L15 AND PD<2004
=> d 116 1-3 ibib, kwic
L16 ANSWER 1 OF 3 USPATFULL on STN
ACCESSION NUMBER:
                    2003:30960 USPATFULL
                       Use of methylnaltrexone to treat immune suppression
TITLE:
INVENTOR(S):
                       Moss, Jonathan, Chicago, IL, UNITED STATES
                       Yuan, Chun-Su, Chicago, IL, UNITED STATES
                       University of Chicago, Chicago, IL (U.S. corporation)
PATENT ASSIGNEE(S):
                           NUMBER
                                       KIND DATE
                       ______
PATENT INFORMATION:
                      US 20030022909 A1 20030130 US 2002-163482 A1 20020605 (10)
                                                                 <--
APPLICATION INFO.:
                            NUMBER DATE
                       _____
PRIORITY INFORMATION: US 2001-295571P 20010605 (60)
                       US 2002-374454P 20020422 (60)
                Utility
DOCUMENT TYPE:
FILE SEGMENT: APPLICATION LEGAL REPRESENTATIVE: Chantal Morgan D'Apuzzo, Wolf, Greenfield & Sacks,
                       P.C., 600 Atlantic Ave., Boston, MA, 02210
                      81
NUMBER OF CLAIMS:
                      1
EXEMPLARY CLAIM:
                      1407
LINE COUNT:
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       . . . Methylnaltrexone is available in a powder form from
      Mallinckrodt Pharmaceuticals, St. Louis, Mo. Methylnaltrexone can be
      prepared as a sterile solution at a concentration of 5 mg/ml.
      Methylnaltrexone can also be administered as an oral agent in a capsule
```

or tablet or in an oral solution.

IT 73232-52-7, Methylnaltrexone

(peripheral opioid antagonists such as methylnaltrexone to treat opioid-induced immune suppression)

L16 ANSWER 2 OF 3 USPATFULL on STN

ACCESSION NUMBER: 1998:115766 USPATFULL

TITLE: Pharmaceutical compositions comprising an opiate antagonist and calcium salts, their use for the

treatment of endorphin-mediated pathologies

INVENTOR(S): Minoia, Paolo, Via M. Viterbo 12, I-70013 Castellana

Grotte, (Bari), Italy

Sciorsci, Raffaele Luigi, Via Positano, 84/B, I-70014

Conversano, (Bari), Italy

	NUMBER	KIND DATE	
PATENT INFORMATION:	US 5811451	19980922	<
	WO 9531985	19951130	<
APPLICATION INFO.:	US 1996-737902	19961121	(8)
	WO 1995-EP1931	19950522	
		19961121	PCT 371 date
		19961121	PCT 102(e) date

NUMBER DATE

PRIORITY INFORMATION: IT 1994-MI1048 19940524

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: MacMillan, Keith D. LEGAL REPRESENTATIVE: Bucknam and Archer

NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 464

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- DETD The administration of 5 mg of naloxone dissolved in a $\underline{\text{solution}}$ of 50 g of calcium gluconate in 500 ml of sterile water in one cow affected by the above mentioned. . .
- DETD 40 dogs affected by parvovirus gastroenteritis were treated i.v. daily with a sterile aqueous **solution** containing naloxone (0.5-1 mg), calcium gluconate (0.5 g), vitamin C (500-1000 mg), vitamin K (1 g).
- 50-81-7, Vitamin C, biological studies 125-73-5, Dextrorphan ΤТ 137-08-6, Calcium pantothenate 299-28-5, Calcium gluconate 465-65-6, Naloxone 591-64-0, Calcium levulinate 814-80-2, Calcium lactate 2520-36-7, Ficine 5001-51-4, Calcium lactobionate 5743-27-1, Calcium ascorbate 5743-34-0, Calcium borogluconate 6384-92-5 7440-70-2D, Calcium, salts 9001-00-7, Bromelin 9001-01-8, Callicrein 9001-09-6, Chymopapain 9001-12-1, Collagenase 9001-73-4, Papaine 9001-75-6, Pepsin 9001-92-7, Protease 9002-07-7, Trypsin 9004-06-2, Elastase 9004-07-3, Chymotrypsin 9014-01-1, Subtilisin 9028-00-6, Clostripain 12001-79-5, Vitamin K 14357-78-9, Diprenorphine 16590-41-3, Naltrexone 17673-25-5, Phorbol 20123-80-2, Calcium dobesilate 20594-83-6, Nalbuphine 29039-00-7, Calcium glucoheptonate 37228-80-1, Proteinase A 39450-01-6 55096-26-9, Nalmefene 56095-64-8 56649-76-4, MR-2266 71276-43-2, Quadazocine 72782-05-9, β -Funaltrexamine 73232-50-5, Methylnaloxonium 73232-52-7 73674-85-8, Naloxazone 75684-07-0, Bremazocine 81669-70-7, Metalloendopeptidase 82823-99-2, Naltrexonazine 82824-01-9,

Naloxonazine 89352-67-0, ICI 174864 103429-31-8, CTOP 105618-26-6, Norbinaltorphimine 110881-59-9 111555-53-4, Naltrindole 111555-58-9, Naltriben 126876-64-0, Naltrindole-5'-isothiocyanate 129468-28-6, 7-Benzylidenenaltrexone 136109-04-1, LY 274614 (compns. containing opiate antagonist and calcium salts for treatment of endorphin-mediated disorders in human and veterinary medicine)

L16 ANSWER 3 OF 3 USPATFULL on STN

79:47543 USPATFULL ACCESSION NUMBER:

TITLE: Quaternary derivatives of noroxymorphone which relieve

intestinal immobility

INVENTOR(S): Goldberg, Leon I., Chicago, IL, United States

Merz, Herbert, Ingelheim am Rhein, Germany, Federal

Republic of

Stockhaus, Klaus, Bingen, Germany, Federal Republic of

PATENT ASSIGNEE(S): Boehringer Ingelheim GmbH, Ingelheim am Rhein, Germany,

Federal Republic of (non-U.S. corporation)

NUMBER KIND DATE -----

PATENT INFORMATION: US 4176186 19791127 APPLICATION INFO.: US 1978-928821 19780728 DOCUMENT TYPE: Utility

19780728 (5)

Utility DOCUMENT TYPE: FILE SEGMENT: Granted

PRIMARY EXAMINER: Daus, Donald G.
ASSISTANT EXAMINER: Rivers, Diana G. LEGAL REPRESENTATIVE: Hammond & Littell

NUMBER OF CLAIMS: 4 EXEMPLARY CLAIM: 1,3,4 LINE COUNT: 413

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- An excess of concentrated ammonia was added to a concentrated aqueous solution of 18.2 gm (0.05 mol) of N-allyl-noroxymorphone hydrochloride, whereupon the free base precipitated, which was separated by extraction with chloroform.. . dried with sodium sulfate and evaporated in vacuo. The residue was dissolved in 150 ml of absolute acetone, the resulting solution was admixed with 18 ml (0.29 mol) of methyl iodide in a pressure vessel, the vessel was sealed, and the. .
- . . . the free base as described in Example 1. The free base was DETD dissolved in 180 ml of absolute acetone, the solution was admixed with 33.0 ml (0.6 mol) of methyl bromide in a pressure vessel, the vessel was sealed, and its. . .
- DETD . . . base was dissolved in 40 ml of absolute acetone, 3.8 gm (0.03 mol) of dimethyl sulfate were added to the $\underline{\text{solution}}$, and the mixture was refluxed for 48 hours, during which time an oil gradually separated out. Thereafter, the oil was. . .
- DETD . . . (0.0256 mol) of N-allyl-noroxymorphone metholodide, prepared in accordance with Example 1, were dissolved in 500 ml of water, and the solution was filtered through a column charged with a strongly basic anion exchanger (bromide-loaded anion exchanger, 171 gm, with an exchange. . . 70° C. The residue was dissolved in 100 ml of methanol, and 100 ml of ether were added to the solution, whereupon 9.65 gm (92% of theory) of the methobromide, m.p. 245° C., separated out. After recrystallization from methanol it had. . .
- DETD . . . were dissolved in a mixture consisting of 50 ml of absolute acetone and 0.5 ml of dimethylformamide, and the resulting solution was admixed with 4.25 gm (44.8 millimols) of methyl bromide. The reaction mixture was then allowed to stand for three. . .

- DETD . . . hydrochloride in Example 1. The free base was dissolved in 50 ml of absolute acetone in a pressure vessel, the <u>solution</u> was admixed with 8 ml (0.128 mol) of methyl iodide, the vessel was sealed, and the reaction mixture was heated. . .
- DETD . . . millimols) of N-propargyl-noroxymorphone were dissolved in a mixture consisting of 30 ml of methanol and 20 ml of dimethylformamide, the <u>solution</u> was admixed with 6.8 gm (71.6 millimols) of methyl bromide, and the mixture was heated at 70° C. in a. . .
- DETD . . . methylene chloride, 3.4 gm (0.033 mol) of triethylamine were added and, while cooling the mixture on an ice bath, a solution of 2.6 gm (0.033 mol) of acetyl chloride in absolute methylene chloride was admixed therewith. The ice bath was then. . . reaction mixture was slowly allowed to warm to room temperature and was subsequently refluxed for one hour. Thereafter, the reaction solution was cooled, washed twice with ice water, dried with sodium sulfate and evaporated in vacuo, leaving as the residue O.sup.3. . .
- DETD . . . in analogy to the procedure of Example 2. After a reaction time of seven days at 70° C., the reaction $\underline{solution}$ was evaporated in vacuo, leaving as the residue O.sup.3 -acetyl-N-allyl-noroxymorphone methobromide.
- DETD (c) The evaporation residue obtained in step (c) was dissolved in 1 N hydrobromic acid, and the <u>solution</u> was evaporated in vacuo on a water bath at 60° C. The residue was crystallized as described in Example 2,. . .
- DETD . . . was dissolved in 60 ml of absolute methylene chloride. While stirring and cooling it on an ice bath, the resulting solution was admixed with 2.22 gm (0.015 mol) of trimethyloxonium fluoroborate. After 1 hour the ice bath was removed, and the mixture was stirred for sixteen hours at room temperature. Thereafter, the reaction solution was evaporated, the residual quaternary fluoroborate was dissolved in 150 ml of water, and the solution was filtered, in analogy to Example 2, through a strong basic anion exchange column (175 gm, OH-form, about 0.25 Val), and the column was rinsed with about 1 liter of water. The combined aqueous solutions were then acidified with concentrated hydrobrmic acid (pH about 3) and subsequently evaporated in vacuo on a water bath at. . .
- DETD . . . mol) of trans-3-chloroallyl chloride and 70 ml of dimethylformamide was stirred for four hours at 90° C.

 Thereafter, the reaction <u>solution</u> was evaporated in vacuo, and the residue was shaken with a mixture of 75 ml of chloroform and 75 ml.
- DETD The hydrochloride, m.p. 243° C., was obtained by dissolving the base in methanolic hydrochloric acid and adding ether to the **solution** until it just turned cloudy.
- DETD . . . hydrochloride, m.p. 202° C., was obtained by dissolving the base in ethanolic hydrochloric acid and adding ether thereto until the **solution** just began to turn cloudy.
- DETD . . inert pharmaceutical carrier and one effective dosage unit of the active ingredient, such as tablets, coated pills, capsules, wafers, powders, solutions, suspensions, emulsions, syrups, suppositories and the like. One effective dosage unit of the compounds according to the present invention is. . .
- DETD . . . a portion of the inert excipients, and the mixture is granulated in conventional manner with the aid of an aqueous **solution** of the soluble starch. The granulate is then dried and admixed with the remainder of the inert excipients, and the. .
- DETD Hypodermic solution
- DETD The solution is compounded from the following ingredients:
- DETD The active ingredient and the sodium chloride are dissolved in the distilled water, the <u>solution</u> is filtered until free from

```
suspended particles, and the filtrate is filled into 5 cc-ampules which
       are sterilized and sealed.. . .
      Drop solution
DETD
DETD
      The solution is compounded from the following ingredients:
      The active ingredient and the p-hydroxy-benzoates (preservatives) are
       dissolved in the de-mineralized water, the solution is
       filtered, and the filtrate is filled into 100 \text{ ml-bottles}. 5 ml of the
       solution are an oral dosage unit composition containing 50 mgm
       of the active ingredient.
                                  73232-49-2P 73232-51-6P 73232-52-7P
      73232-44-7P 73232-48-1P
TT
      73232-53-8P 73232-54-9P 73232-56-1P 73246-51-2P
        (preparation of)
=> s disodium edetate
         4470 DISODIUM EDETATE
L17
=> d his
     (FILE 'HOME' ENTERED AT 17:04:33 ON 26 FEB 2009)
     FILE 'REGISTRY' ENTERED AT 17:04:47 ON 26 FEB 2009
             1 S METHYLNALTREXONE/CN
T.1
     FILE 'ADISCTI, ADISINSIGHT, ADISNEWS, BIOSIS, BIOTECHNO, CAPLUS, DDFB,
     DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ESBIOBASE,
     IFIPAT, IMSDRUGNEWS, IMSPRODUCT, IPA, KOSMET, LIFESCI, MEDLINE,
     NAPRALERT, NLDB, NUTRACEUT, PASCAL, PCTGEN, PHARMAML, ...' ENTERED AT
     17:05:29 ON 26 FEB 2009
            472 S L1
L2
L3
        7560721 S SOLUTION
            472 S L1 AND L2
L4
             49 S L2 AND L3
L5
        7717984 S PH
1.6
L7
        666798 S CHELAT?
              8 S L5 AND L6 AND L7
L8
              8 DUP REM L8 (0 DUPLICATES REMOVED)
L9
              0 S L9 AND PD<2004
L10
        451335 S EDTA OR DIPOTASSIUM EDETATE OR DISODIUM ETETATE OR EDETATE CA
T.11
L12
            16 S L5 AND L11
L13
            16 DUP REM L12 (0 DUPLICATES REMOVED)
L14
             1 S L13 AND PD<2004
             45 DUP REM L5 (4 DUPLICATES REMOVED)
L15
L16
             3 S L15 AND PD<2004
          4470 S DISODIUM EDETATE
I.17
=> s 111 or 117
T.18
     453892 L11 OR L17
=> s 118 and 12
L19
           17 L18 AND L2
=> dup rem
ENTER L# LIST OR (END):119
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IMSPRODUCT, KOSMET, NUTRACEUT, PCTGEN, PHARMAML, USGENE'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIOUE
PROCESSING COMPLETED FOR L19
             17 DUP REM L19 (0 DUPLICATES REMOVED)
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 \Rightarrow s 120 and pd<2004 5 FILES SEARCHED... '2004' NOT A VALID FIELD CODE '2004' NOT A VALID FIELD CODE '2004' NOT A VALID FIELD CODE 14 FILES SEARCHED... 16 FILES SEARCHED... '2004' NOT A VALID FIELD CODE 22 FILES SEARCHED... '2004' NOT A VALID FIELD CODE 27 FILES SEARCHED... '2004' NOT A VALID FIELD CODE 31 FILES SEARCHED... L21 1 L20 AND PD<2004 => d 121 ibib, kwic L21 ANSWER 1 OF 1 USPATFULL on STN ACCESSION NUMBER: 2003:30960 USPATFULL TITLE: Use of methylnaltrexone to treat immune suppression INVENTOR(S): Moss, Jonathan, Chicago, IL, UNITED STATES Yuan, Chun-Su, Chicago, IL, UNITED STATES PATENT ASSIGNEE(S): University of Chicago, Chicago, IL (U.S. corporation) NUMBER KIND DATE _____ PATENT INFORMATION: US 20030022909 A1 20030130 <--US 2002-163482 A1 20020605 (10) APPLICATION INFO.: NUMBER DATE PRIORITY INFORMATION: US 2001-295571P 20010605 (60) US 2002-374454P 20020422 (60) DOCUMENT TYPE: Utility APPLICATION FILE SEGMENT: LEGAL REPRESENTATIVE: Chantal Morgan D'Apuzzo, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Ave., Boston, MA, 02210 NUMBER OF CLAIMS: 81 EXEMPLARY CLAIM: 1 LINE COUNT: 1407

DETD [0089] Blood is drawn from the arm catheter used for methylnaltrexone injection into **EDTA** Vacutainers prelabeled with the study number, subject number and initials, dose number, date, time of sample, at the times indicated. . .

IT 73232-52-7, Methylnaltrexone

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

(peripheral opioid antagonists such as methylnaltrexone to treat opioid-induced immune suppression)